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Sent: Tuesday, September 06, 2011 1:33 PM
To: Alemi, Manucher
Subject: Comments

Manucher,

I don't remember who you wanted SBx7 comments sent to so maybe you can pass this along to whoever it should go to.

A couple of comments on the Aug. 31 meeting. It is hard to comment from the phone so I thought I'd put down a few thoughts.

Most importantly, I believe the Committee is approaching the challenge appropriately. A few issues deserve some emphasis though.

First, at each of the 3 scales, the water balance equation does need to be developed. Most of the Subcommittee is focused on the District and Regional level, but the Farm level balance also needs to be addressed. Staff appropriately attempted to get the Subcommittee to look at the individual components of each of the water balance equations and determine whether the information is available, how difficult / costly it would be to acquire, how critical it is, etc. A number of issues came up during the meeting which diverted the group from really addressing the water balance approach at each scale, but in a round-about way many of the concerns over information availability, reliability, etc. got discussed.

As to the Report, I believe it is important to lay out the strengths, weaknesses, and limitations of doing the water balance / efficiency analysis at each of the scales. Of particular concern is where assumptions would need to be made (e.g. the back calculation of gw pumping and recharge) and how critical to the reliability of the results such assumptions would be. The final Report should address the reliability / accuracy of each water balance equation component and the final result reliability. It would also be important to clearly state at which scale their use is appropriate and valuable. For example, if you wanted to affect irrigation efficiency at the farm level, a Regional scale analysis would be of little benefit while the Farm scale water balance would be the most appropriate for measuring and improving on-farm irrigation efficiency.

Folks have been doing water balances for a long time so the Subcommittee is not breaking new ground, but the long-term value of putting the Report together may be that it may frame a method by which irrigation efficiency may be determined, by all parties doing such calculations. The report should emphasize where the greatest information / data gaps exist. Especially at the supplier and regional scales, the groundwater component of the analyses is greatly lacking. We can make all the good assumptions we want, but until we know the groundwater pumping and recharge, folks will be able to bias the analysis to "prove" their point.

The DU issue diverts energy away from working on the irrigation efficiency issue. I know DU was in the legislation but DU is a single irrigation event measurement. Surface irrigation DU measurements on the same field can change drastically during the irrigation season. Each irrigation event can give a different DU value, often very significantly different. This usually is not true of sprinkler and microirrigation systems. Also, a high DU irrigation can still be a inefficient irrigation if it is an over-irrigation. It just says

that the field was uniformly over-irrigated. A low DU event could be highly efficient if it is an under-irrigation. That said, most low uniformity irrigation does lead to over-irrigation on at least a portion of the field and can lead to inefficient irrigation. Irrigation efficiency is a combination of irrigation system performance (reflected in the DU) AND management decisions such as applying the correct amount of water. The bottom line though is that to be highly efficient, the irrigation system needs to be highly uniform.

Larry